

YOUR NAME: \_\_\_\_\_

George Voutsadakis

Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Multiply and simplify

$$\frac{x^2 - 9}{3x^3} \cdot \frac{12x^2}{x + 3} =$$

2. Divide and simplify

$$\frac{x - 4}{3x^2} \div \frac{2x - 8}{9x} =$$

3. Add and simplify

$$\frac{10x + 11}{2x^2 + 5x + 2} - \frac{4}{2x + 1} =$$

4. Simplify the complex fraction

$$\frac{\frac{5}{x-2} + \frac{4}{x^2-4}}{\frac{3}{x+2} - \frac{1}{x-2}} =$$